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EXAMINER

PRATT, HELEN F

ART UNIT PAPER NUMBER

1761

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/14/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/624,225

Applicant(s)

SINHA ET AL.

Examiner

Helen F. Pratt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraut et al (U.S. Reg. No. H1014) in view of Hirotoimo (JP60078536), Kahn et al (U.S. Pat. No. 4,350,711), Wettlaufer (U.S. Pat. No. 6,479,092) and Phillips (U.S. Pat. No. 6,254,919). The rejections and references are incorporated as cited in the prior office action and further in view of Rejimbai Jr. et al.
3. With regard to claim 1, Kraut et al disclose a method of making cherries comprising the steps of providing brined cherries, leaching of the cherries to lower the level of residual sulfur dioxide of 100ppm or less, which encompasses 50 ppm or less as claimed by applicant (col 1 lines 33-34, col 2 lines 24-26), and then finally adding flavor and sugar (col 2 lines 59-61). However, Kraut et al failed to disclose freezing the cherries in water and using an infusion bath comprising cherry juice. Hirotoimo teaches a fruit such as cherry having high sugar content. The fruit is washed with water, drained and frozen preferably within 60 minutes with a quick freezer in order to prevent the fruit pulp from damage. It would be expected as an obvious alternative step as taught by Hirotoimo to freeze the cherries in order to arrive at the same freezing point of the cherries. The frozen fruit is immersed in an aqueous solution of sucrose and hereby having a sugar content of 30 to 55%. Besides, freezing fruits in water is well known in the art as evidenced by Rejimbai Jr. et al that teach a method of preserving fruits by

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placing in a liquid (for example water) having a freezing point higher than that of the fruits (abstract, col 3 lines 10-24). It would not have involved an inventive step in freezing cherries in water as instantly claimed by applicant. It would be obvious to one of ordinary skill in the art to modify Kraut et al with Hirotoimo because freezing the cherries would prevent pulp damage and also it would not involve an inventive step to utilize cherry juice or any other type of flavor in the infusion bath because it depends on consumer preference.

4. With regard to claims 2-3, Kraut et al disclose adding flavor and sugar to the processed cherries. However, Kraut et al failed to disclose the temperature of the cherry juice. Kahn et al teach a method of infusing fruits such as cherries (col 1 lines 57-58) with sugar solids in infusion baths at a temperature from about 45°F to about 120°F (col 6 lines 5-7). Kahn et al is silent as to using cherry juice in the infusion process. However, it would be obvious to one of ordinary skill in the art to utilize cherry juice or any other type of flavor in the infusion bath in order to improve the texture and flavor of the final infused fruit product, or to enhance the stability of the fruit against possible leakage of the infused fruit during storage.

5. With regard to claims 4 and 7, Kraut et al disclose drying the cherries in order to maintain only a minimum of free syrup (col 5 lines 13-18).

6 With regard to claims 5-6, Kraut et al disclose leaching of the cherries to lower the level of residual sulfur dioxide of 100ppm or less, which encompasses 10ppm or less as recited by applicant (col 1 lines 33-34, col 2 lines 24-26).

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7. With regard to claims 8-9, Kraut et al failed to disclose the moisture content of the cherries. However, Kahn et al teach a method of infusing fruits such as cherries, which after drying has a moisture content of about 15 to 28% in order to improve microbiological stability (col 7 lines 12-19). This range is within applicant's recited range. Kahn also teaches that it is known to freeze fruit before further processing (col. 2, lines 48-53). It would have been obvious to one of ordinary skill in the art to modify Kraut et al with Kahn et al by having cherries with reduced moisture content in order to improve microbiological stability and also to freeze before further processing.

8. With regard to claims 12-14, Kraut et al disclose that all process was accomplished in less than about 5 days (see claims 4 and 5). The particular length of time of infusing is seen to have been within the skill of the ordinary worker depending on various factors such as the amount of soluble solids, the temperature, the amount of fruit, in the infusing mixture (col. 2, lines 58-70, col. 3, lines 1-70). Therefore, it would have been obvious to infuse fruit for particular length of time depending on the factors as stated above.

9. With regard to claims 15 and 16, Kraut et al in view of Kahn et al disclose infused cherry products. It would be obvious to one of ordinary skill in the art to expect that these products are value-added fruit products.

10. With regard to claims 10-11, Kraut et al failed to disclose the water activity of the cherries. However, Wettlaufer teaches a method for infusing fruit such as cherries (col 10 lines 27-35). In addition Wettlaufer teaches that a water activity range of 0.4-0.64 is desirable for good storage life of the product, which is within applicants recited range

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(col 9 lines 10-12). It would have been obvious to one of ordinary skill in the art to modify Kraut et al with Wettlaufer by producing cherries having a water activity in this range in order to have good storage life.

11. With regard to claims 17 and 18, Kraut et al disclose a method of making cherries comprising the steps of providing brined cherries, leaching of the cherries to lower the level of residual sulfur dioxide of 100ppm or less, which encompasses 50ppm or less as recited by applicant (col 1 lines 33-34, col 2 lines 24-26), and then finally adding flavor and sugar (col 2 lines 59-61). The leached cherries are immersed in a sweetener syrup comprising a red coloring agent (abstract). Red cabbage juice is a well-known red coloring agent in the art and it would not have involved an inventive step to utilize this colorant. Kraut et al also disclose fruit solids of about 35 Brix to about 45 Brix (col 4 lines 66-68). However, Kraut et al failed to disclose freezing the cherries in water or show a pasteurizing step. Hiroto teaches a fruit such as cherry having high sugar content. The fruit is washed with water, drained and frozen preferably within 60minutes with a quick freezer in order to prevent the fruit pulp from damage. It would be expected as an obvious alternative step as taught by Hiroto to freeze the cherries in order to arrive at the same freezing point of the cherries. Kahn et al teach a method of infusing fruits and that conventional food additives maybe added to the post-infusion bath including flavoring agents, colorants, etc. Suitable flavorings include caramel, fruit, etc (col 7 lines 58-64). Phillips teaches a method of preparing shelf-stable fruit such as tart cherries by immersing fruit in a bath of sugar syrup and then drying with hot air at a temperature effective for pasteurization (col 3 lines 52-67). Kraut et al is silent as to

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adding lemon juice, however, it would be obvious to one of ordinary skill in the art to modify Kraut et al with the teachings of Hirotoimo, Phillips and Kahn et al by utilizing any flavoring agent such as lemon juice or natural black sweet cherry flavor as recited by applicant and utilizing a pasteurizing step in order to impart stability of the product.

12. With regard to claim 19, Kraut et al failed to disclose a pasteurization temperature. However, Phillips discloses pasteurizing at an effective temperature such as from about 80°C (176°F) to about 95°C (203°F) (col 5 lines 25-26). This range is within applicants' recited range. It would be obvious to one of ordinary skill in the art to expect that this temperature would be effective for stability of the product. Phillips is silent as to the cooling temperature. However, it would be obvious to one of ordinary skill in the art to expect that the product would be cooled to about room temperature as recited by applicant in order to complete the process.

13. With regard to claim 20, Kraut et al failed to disclose a temperature at which to add the flavorant. However, it would be obvious to one of ordinary skill in the art to expect that flavorants tend to destabilize at high temperatures and therefore need to be added at or near room temperature.

14. With regard to claim 21, Kraut et al disclose a method of making cherries comprising the steps of providing brined cherries, leaching of the cherries to lower the level of residual sulfur dioxide of 100ppm or less, which encompasses 50ppm or less as recited by applicant (col 1 lines 33-34, col 2 lines 24-26), and then finally adding flavor and sugar (col 2 lines 59-61). However, Kraut et al failed to disclose freezing the cherries and infusing in a two-step process. Hirotoimo teaches a fruit such as cherry

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having high sugar content. The fruit is washed with water, drained and frozen preferably within 60 minutes with a quick freezer in order to prevent the fruit pulp from damage. The frozen fruit is immersed in an aqueous solution of sucrose and hereby having a sugar content of 30 to 55%. It would be expected as an obvious alternative step as taught by Hiroto to freeze the cherries in order to arrive at the same freezing point of the cherries. Kraut et al is silent as to infusing the brined cherries with red tart cherry juice. However, Kahn et al teach a method of infusing fruits with food additives including flavoring agents, colorants, etc. Suitable flavorings include caramel, fruit, etc (col 7 lines 58-64). The infusion process maybe limited to the use of two infusion baths so long as the about 32-55% water-soluble solids content is reached in the fruit (col 4 lines 1-5). Kahn et al further teach that the fruit is immersed in the first bath until equilibrium is attained and then immersed in a second bath until equilibrium is attained. Kahn et al is silent as to the period of time this takes. However, it would be expected that the greater the level of Brix in the infusion bath, the lesser the amount of time needed for infusion. It would be obvious to one of ordinary skill in the art to utilize a high Brix infusion bath for the product to reduce time. It would be obvious to one of ordinary skill in the art to expect that any suitable fruit/juice could be utilized including red tart cherry juice as a matter of consumer preference. Phillips teaches Phillips teaches a method of preparing shelf-stable fruit such as tart cherries by immersing fruit in a bath of sugar syrup and then drying with hot air at a temperature effective for pasteurization such as from about 80°C (176°F) to about 95°C (203°F) (col 5 lines 25-26), which is about applicant's temperature range in order to make the product shelf stable. It would be obvious to one

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of ordinary skill in the art to dry the product at this temperature in order to make it stable.

15. With regard to claims 22 and 25, Kraut et al failed to disclose freezing cherries in water. However, Hirotoimo teaches a fruit such as cherry having high sugar content. The fruit is washed with water, drained and frozen preferably within 60minutes with a quick freezer in order to prevent the fruit pulp from damage. It would be expected as an obvious alternative step as taught by Hirotoimo to freeze the cherries in order to arrive at the same freezing point of the cherries. With regard to claim 23, Kraut et al disclose a method of making cherries comprising the steps of providing brined cherries, leaching of the cherries to lower the level of residual sulfur dioxide of 100ppm or less, which encompasses 50ppm or less as recited by applicant (col 1 lines 33-34, col 2 lines 24-26), and then finally adding flavor and sugar (col 2 lines 59-61). The leached cherries are immersed in a sweetener syrup consisting essentially of high fructose corn syrup comprising a red coloring agent (col 1 lines 60-66). Also, citric acid, the main acid is used in treating strawberries (col. 8, lines 60-70). Certainly, it would have been obvious to use an acid in a infusion liquid, anytime the pH of the mixture needs to be adjusted toward the acid end. Red cabbage juice is a well-known red coloring agent in the art and it would not have involved an inventive step to utilize this colorant. Kraut et al also disclose a Brix value from about 65 to about 75 (col 5 lines 1-2). However, Kraut is silent as to the addition of lemon juice. Kahn et al teach a method of infusing fruits and that conventional food additives maybe added to the post-infusion bath including flavoring agents, colorants, and acid, etc. Suitable flavorings include caramel, fruit, etc

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(col 7 lines 58-64). Phillips teaches a method of preparing shelf-stable fruit such as tart cherries by immersing fruit in a bath of sugar syrup and then drying with hot air at a temperature effective for pasteurization (col 3 lines 52-67) such as from about 80°C (176°F) to about 95°C (203°F) (col 5 lines 25-26), which is about applicant's temperature range. Kraut et al is silent as to adding lemon juice, however, it would be obvious to one of ordinary skill in the art to modify Kraut et al with the teachings of Phillips and Kahn et al by utilizing any flavoring agent such as lemon juice or citric acid or natural black sweet cherry flavor as recited by applicant and utilizing a pasteurizing step in order to impart stability of the product.

16. With regard to claim 24, Kraut et al disclose freezing the processed product (col 5 lines 63-67).

17. With regard to claim 26, Kraut et al disclose brined cherries such as whole cherry fruit, fruit pieces, etc (col 2 lines 30-36).

### ***Response to Arguments***

18. Applicant's arguments and declaration with regards to claims 1-20, 22 and 25 have been considered but are moot in view of the new ground(s) of rejection. Applicant argues that the reference to Hirotoimo is to freezing citrus and not cherries. However, the reference discloses freezing fruit in water. Other references disclose that freezing fruit is known such as Kahn as above. Freezing is common in the fruit industry since fruit is not available year round, and freezing the fruit makes processing possible at other times of the year. In addition, it is not seen that it is critical that the cherries are

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frozen in water, as Applicant's claim 1 discloses only that the cherries are sulfured, frozen, then soaked in cold water then infused (oo15). Whatever, the freezing process does to the fruit, the process of freezing fruit is well known.

The reference to Kahn may not give an example of freezing cherries, but does of other fruit as above. It would have been obvious to freeze any fruit for use later in the season. Also, cherries contain a lot of water as do all fruits. Applicant does not say how much water is used in the process. Therefore, no patentable distinction is seen at this time in the use of frozen fruit, which contains a lot of water and in freezing the fruit in water. Certainly, it is well known that freezing fruit softens the tissue, that is why frozen fruit is not as acceptable as fresh fruit, except in for instance, frozen products.

Applicants argue that none of the references teaches the claimed process, in particularly adding lemon juice to the process. However, the references are used in combination, not singly to show the process. Lemon juice is a well-known acidulent. Applicants are only using 1%. None of the independent claims except for claim 23 require lemon juice. In addition, Kahn discloses the use of 15 grams of citric acid, which is the main acid in lemons (col. 8, lines 60-70).

Applicants argue as to the length of time of infusing the cherries. However, the references disclose particular amounts of time. It would have been within the skill of the ordinary worker to infuse for particular lengths of time depending on the type of product made.

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Kraut et al or Hiroto do not disclose freezing cherries in water. However, freezing fruits in water is well known in the art as evidenced by Rejimbai Jr. et al that teach a method of preserving fruits by placing in a liquid (for example water) having a freezing point higher than that of the fruits (abstract, col 3 lines 10-24). Also, Kahn teaches that freezing fruit is well known as above. It would not have involved an inventive step in freezing cherries in water as instantly claimed by applicant.

19. Regarding independent claim 23, applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). One of ordinary skill in the art would expect that lemon juice is inherently functions as a lemon flavorant and therefore it would not involve an inventive step utilizing any flavoring agent such as lemon juice or natural black sweet cherry flavor as recited by applicant. Besides it is unclear how lemon juice is different from a lemon flavorant because they both contain lemon. Also, as above citric acid has been shown

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which is the major acid in lemons. No patentable distinction is seen at this time in the use of citric acid instead of lemon juice.

20. Regarding claim 12, applicant argues that the less than five days disclosed by Kraut et al only applies to the immersion step and that the infusion step of about 6 hours to about 15 hours is significantly less than the immersion step taught by Kraut.

However, Kraut et al discloses that the method of its invention involves two steps leaching and immersion (col 2 lines 23-29). The leaching step takes 24-48 hours (col 3 lines 39-41) and the immersion step takes less than about 5 days or 2 days as disclosed in claims 4 and 5. Overall, it would be obvious to one of ordinary skill in the art that this two-step method takes less than about one week as instantly claimed. Besides the term "about" as instantly claimed does not provide a specific time duration.

21. Regarding claims 21 and 22, applicant argues that the infusion is not merely a matter of infusing at a faster rate but rather to higher soluble solids content. However, Kahn et al teach as cited in the prior office action, the infusion process maybe limited to the use of two infusion baths so long as the about 32-55% water-soluble solids content is reached in the fruit (col 4 lines 1-5). Therefore, it would not have involved an inventive step to utilize a two-step infusing process.

Regarding applicant's declaration;

Statements 6 and 7: As stated above, it is well known to freeze fruits in water for the purpose of preservation as evidenced by Rejimbai et al.

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Statement 8: addition of lemon juice or any other juice not excluded by the claims. Also, citric acid has been shown as above. Scope of invention, particularly claims 1-22, is not directed to the making of black cherries.

Statement 9: Applicant's opinion while considered, is not substantiated by data.

Applicant is speculating about the completion time of the process steps.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen F. Pratt whose telephone number is 571-272-1404. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Milton Cano, can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hp 3-12-07

  
HELEN PRATT  
PRIMARY EXAMINER